

Patent claims

1. A method for logging a radio module (1) into a cellular radio network, where the radio module (1) automatically logs into the radio network when it is turned on by virtue of

- the radio module (1) transmitting a login message to the radio network and
- the radio network storing login data for the radio module (1),

- where the login data are deleted from the radio network again when the radio module (1) logs out,
characterized in that

in response to an autoreset signal an autoreset is automatically triggered in which the radio module (1) temporarily turns off and then on again or deactivates and registers again in the radio network.

2. The method as claimed in claim 1,
where the autoreset signal is produced when the radio module (1) is logged out of the radio network.

3. The method as claimed in claim 1,
where the autoreset signal is produced in the radio module as soon a first time interval has elapsed.

4. The method as claimed in one of claims 1 to 3,
where the radio module (1) waits a second time interval between turning off and turning on again in the event of the autoreset.

5. The method as claimed in one of claims 1 to 3,
where the radio module turns on again immediately after turning off in the event of the autoreset.

6. The method as claimed in claim 4 or 5, where the first and/or second time interval can be set, particularly by radio command.

7. The method as claimed in claim 6, where a maximum login time, after which the radio network logs out the radio module (1), and/or activity intervals are determined in which the radio module (1) is supposed to be active, and these are used to determine the first and/or second time interval(s), in particular adaptively.

8. The method as claimed in one of claims 3 to 7, where the first time interval is restarted when the radio module (1) sends data to the radio network or receives data from the radio network.

9. The method as claimed in one of claims 1 to 8, where data from volatile memory areas of the radio module (1) are stored in nonvolatile form or outside the radio module (1) before the autoreset for the radio module (1) and are written back to the volatile memory areas after it is turned on.

10. The method as claimed in one of claims 1 to 9, where the radio network is a GSM network, a GPRS network, a UMTS network, an EDGE network or a WLAN.

11. A radio module (1) for a cellular radio network, which has the following:

- a transceiver (4) for sending and receiving messages,

- a login device (3) which is connected to the transceiver (4) and is designed to produce a login message and to send it via the transceiver (4) when the radio module (1) is turned on, characterized by
an auto reset trigger device (5) which can produce or receive an autoreset signal, and
an autoreset unit (7) which is connected to the autoreset trigger device (5) and can receive the autoreset signal and which is designed to disconnect the radio module (1) and then to turn it on again or to log the radio module (1) out and then in again, using the login device (3), when said autoreset signal is received.

12. The radio module (1) as claimed in claim 11, where the autoreset trigger device (5) is designed to output an autoreset signal when a logout message is received, and where this logout message comprises information that the login data for the radio module (1) have been deleted from the radio network.

13. The radio module (1) as claimed in claim 11, where the radio module (1) additionally has a first timer (6) for detecting when a first time interval has elapsed which is connected to the autoreset trigger device (5), which can output an autoreset signal when the first time interval has elapsed.

14. The radio module (14) as claimed in one of claims 11 to 13, where the radio module additionally has a second timer (8) for detecting when a second time interval has elapsed which is connected to the autoreset unit (7), the latter being designed to turn the radio module (1) on again

only after a delay by the second time interval after it has been turned off in the event of the autoreset.

15. The radio module (1) as claimed in claim 13 or 14, where the first and/or the second timer (6, 8) respectively has/have an input (6a, 8a) and a time interval memory (6b, 8b) and is/are designed to store a time interval which has been input using the input unit (6a, 8a) and thus to define the first or second time interval.

16. The radio module (1) as claimed in claim 15, where the input unit (6a, 8a) is connected to the transceiver (4) and is designed to define the first or second time interval by radio command.

17. The radio module (1) as claimed in claim 16, where the radio module (1) additionally has an activity memory (10a) which holds activity times for the radio module, a maximum login time memory (10b) which holds a maximum possible login time for the radio module (1) in the radio network, and also an evaluation unit (10), where the evaluation unit (10) can access the activity memory (10a) and the maximum login time memory (10b) and can address the input unit (6a, 8a) and is designed to define the first and second time intervals, in particular adaptively.

18. The radio module (1) as claimed in one of claims 13 to 17, characterized by a time reset unit (9) which is connected to the transceiver (4) and to the first timer (6) and is designed

to reset the first timer (6) whenever data in the radio module (1) have been sent to or received from the radio network.

19. The radio module (1) as claimed in one of claims 11 to 18, characterized by
a buffer store (11) which is nonvolatile even when the power supply for the rest of the radio module (1) is interrupted and which can thus buffer data during the autoreset.

20. The radio module (1) as claimed in one of claims 11 to 19, in the form of a GSM module, a GRPS module, a UMTS module, an EDGE module or a WLAN module.